

layer bonded to the lower surfaces of the plastic film layer sections and immediately underlying the openings, the topsheet having a Klemm's water absorbency lower than 10 mm, each of the openings has a width of 0.05 ~ 1 mm so that a total open area thereof occupies 3 ~ 40 % of a surface area of the topsheet, edges of the plastic film layer sections defining the openings being partially fibrillated so as to form a rising portion having the maximum height of 1.5 mm and component fibers of the first fibrous layer having a fineness of 0.5 ~ 20 dtex and a basis weight of 5 ~ 60 g/m<sup>2</sup>; and the core has a second fibrous layer being closely contiguous to the lower surface of the first fibrous layer and a third fibrous layer being closely contiguous to the lower surface of the second fibrous layer wherein the second fibrous layer has a Klemm's water absorbency is lower than 35 mm but higher than a Klemm's water absorbency of the topsheet by 15 mm or more and the third fibrous layer has a Klemm's water absorbency of at least 35 mm but higher than the Klemm's water absorbency of the second fibrous layer by 15 mm or more.- -

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[ Please replace the first full paragraph on page 5 with the following:

A3 --Fig. 5 is a view similar to Fig. 3 but showing another embodiment of this invention;- -

[ Please replace the second full paragraph on page 5 with the following:

A4 --Fig. 6 is a view similar to Fig. 5 but showing another embodiment of this invention;- -

] Please replace the fourth full paragraph on page 5 with the following:

A5 - -Fig. 8 is a view similar to Fig. 6 but showing still another embodiment of this invention; and- -

[ Please replace the last paragraph beginning on page 5 and continuing on page 6 with the following:

A6 - -A sanitary napkin 1 shown by Fig. 1 in a perspective view as partially broken away

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comprises a liquid-pervious topsheet 2, a liquid-impervious backsheet 3 and a liquid-absorbent core 4 disposed between these top- and backsheets 2, 3. The portions of these top- and backsheets 2, 3 extending outward laterally beyond transverse opposite side edges of the core 4 are put flat under a pressure and bonded or welded together. The topsheet 2 has a plurality of flat plastic film layer sections 6 lying on the body side of a wearer and a fibrous assembly layer 7 bonded to the lower surfaces of the film layer sections 6. The core 4 has a concealing layer 41 bonded to the lower surface of the fibrous assembly layer 7 and a liquid holding layer 42 bonded to the lower surface of the concealing layer 41. The backsheet 3 comprises a single plastic sheet.-

Please replace the first full paragraph on page 6 with the following:

--Fig. 2 is a sectional view taken along a line II - II in Fig. 1, Fig. 3 a perspective view showing a part of Fig. 1 in an enlarged scale and Fig. 4 a sectional view taken along a line IV - IV in Fig. 3. The film layer sections 6 distributed over the entire area of the topsheet 2 are obtained by high pressure columnar water stream treatment of hydrophobic or weakly hydrophilic thermoplastic sheet material in the manner as disclosed in Japanese Patent Application Publication No. 1999-217453A. Each of the film layer sections 6 has a thickness of 0.05 ~ 1 mm and is formed along its peripheral edge with rising portion having a thickness similar to or less than the thickness of the flat film layer section 6. A liquid-pervious opening 31 is formed between each pair of the adjacent film layer sections 6, 6.- -

Please replace the last paragraph beginning on page 7 and continuing on page 8 with the following:

--The film layer sections 6 are welded or adhesively bonded to the fibrous assembly layer 7. The film layer sections 6 are intermittently arranged in a first direction X of the topsheet 2 as well as in a second direction Y intersecting the first direction X. A space between each pair

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of the adjacent film layer sections 6, 6 is less than 1 mm in the first direction X as well as in the second direction Y and, in at least one of these two directions X, Y, 0.05 mm or larger. Such space between the adjacent film layer sections 6, 6 defines an opening which allows the fibrous assembly layer 7 to be exposed toward the skin of the napkin wearer. A total area of these openings 31 preferably occupies 3 ~ 40 % of the surface area of the topsheet 2. While a shape of the film layer section 6 is not specified, if the shape is quadrilateral as in the illustrated embodiment, first and second sides 21, 22 extending in parallel to each other in the first direction X as well as third and fourth sides 23, 24 extending in parallel to each other in the second direction Y are preferably in a range of 0.1 ~ 5 mm and crossing angles of these sides 21 ~ 24 are preferably in a range of 20 ~ 160°.- -

Please replace the paragraph beginning on page 8 and continuing on page 9 with the following:

sub 3.1 - The rising portion 17 formed along the peripheral edge of the film layer section 6 is of the same material as the plastic sheet material of the film layer section 6 and, more specifically, the rising portion 17 corresponds to the portion of the plastic sheet material fibrillated under the high pressure columnar water streams. Upper edge 17a of the rising portion 17 undulates along the first ~ fourth sides 21 ~ 24 so that the maximum height of the rising portion 17 as measured from the upper surface of the film layer section 6 to its upper edge 17a is 1.5 mm and the minimum height, i.e., the height of the rising portion 17 defining a trough bottom of the undulation of the rising portion 17 and having its upper edge coinciding with the upper surface of the film layer section 6 is 0 mm. In the vicinity of the rising portion 17 having the minimum height, the film layer section 6 is continuous to the fibrous assembly layer 7 exposed in the opening 31. The topsheet 2 constructed in this manner has a Klemm's water absorbency lower than 10 mm as measured in accordance with prescription of JIS P 814. The topsheet 2 preferably has a breathability of 5 ~ 700 cm<sup>3</sup>/cm<sup>2</sup> sec as measured in accordance with

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prescription of JIS L 1096 and a water-resistance of 0 ~ 200 mm as measured in accordance with prescription of JIS L 1092.- -

Please replace the paragraph beginning on page 9 and continuing on page 10 with the following:

- In the core 4, the concealing layer 41 contains hydrophilic fibers 46 and has a Klemm's water absorbency lower than 35 mm and higher than the Klemm's water absorbency of the topsheet 2 by 15 mm or more. Such concealing layer 41 preferably has a basis weight of 20 ~ 50 g/m<sup>2</sup> and a density lower than 0.05 g/cm<sup>3</sup> which is higher than the density of the fibrous assembly layer 7. The core 4 may be formed, for example, with fluff pulp, a mixture of fluff pulp and thermoplastic synthetic fiber, or thermoplastic synthetic fiber treated to make it rather hydrophilic. The concealing layer 41 may be covered with tissue paper, and bonded to the fibrous assembly layer 7 by means of hot melt adhesive intermittently applied thereto. The liquid holding layer 42 also contains hydrophilic fibers 47 and has a Klemm's water absorbency of at least 35 mm and higher than the Klemm's water absorbency of the concealing layer 41 by 15 mm or more. The liquid holding layer 42 is formed with fluff pulp or a mixture of fluff pulp and high absorption polymer grains 48 with a basis weight of, for example, 50 ~ 500 g/m<sup>2</sup> and a density of 0.05 ~ 0.30 g/cm<sup>3</sup>. The hydrophilic fiber 47 may be fluff pulp, rayon fiber or thermoplastic synthetic fiber treated to make it rather hydrophilic. It is possible to mix the hydrophilic fiber 47 with hydrophobic thermoplastic synthetic fiber up to 20 % by weight. The liquid holding layer 42 is provided with a density higher than the density of the concealing layer 41 and, if desired, mixed with an appropriate quantity of highly hydrophilic fiber 47 to ensure that the liquid holding layer 42 may have a water absorbency higher than that of the concealing layer 41 by at least 15 mm. If desired, the liquid holding layer 42 is covered with tissue paper separately or together with the concealing layer 41.- -

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Please replace the paragraph beginning on page 10, continuing on all of page 11 and ending at the top of page 12 with the following:

--With the sanitary napkin 1 according to such embodiment, menstrual discharge flows through the openings 31 of the topsheet 2 into the fibrous assembly layer 7, then permeates the concealing layer 41 and the liquid holding layer 42, these layers have the Klemm's water absorbency progressively increasing in this order. On the film layer sections 6 of the topsheet 2, menstrual discharge flows through troughs defined between respective pairs of the adjacent individual rising portions 17, 17 into the openings 31. The napkin 1 according to this embodiment allows the topsheet 2 to offer the wearer a dried touch before and after absorption of menstrual discharge without causing a stuffiness even though the film layer sections 6 and the rising portion 17 are hydrophobic. This is because the appropriate gradient of the Klemm's water absorbency enables menstrual discharge to be rapid absorbed by the core 4. The film layer sections 6 of the topsheet 2 are particularly advantageous in that these sections 6 can offer the wearer a dried cloth-like touch and the fibrous assembly layer 7 is particularly advantageous in that this layer 7 can maintain the film layer sections 6 in close contact with the core 4 and thereby can reliably guide menstrual discharge from the openings 31 into the liquid holding layer 42. The concealing layer 41 of the core 4 functions to conceal menstrual discharge absorbed by the liquid holding layer 42 so that the wearer is relieved of somewhat uncomfortable feeling for every disposal of the used napkin. Once menstrual discharge has been absorbed by the high absorption polymer grains 48, there is no anxiety that the menstrual discharge might flow back toward the wearer's skin even if a body weight of the wearer is exerted on the napkin 1. It is possible to arrange each of these concealing layer 41 and liquid holding layer 42 in two or more layers. In such layered structure, the Klemm's water absorbency is preferably adjusted to increase progressively from the uppermost layer to the lowermost layer.--

Please replace the paragraph beginning on page 12 and continuing on page 13 with the

following:

- Fig. 5 a view similar to Fig. 3 but showing another embodiment of this invention. The topsheet 2 of this napkin 1 is formed with the flexible sheet of prior art as shown in Fig. 9. This topsheet 2 has a plurality of film layer sections 6 extending in parallel one to another in the second direction Y, a plurality of opening arrays 32 extending in parallel one to another in the second direction Y, each of the arrays 32 comprising a plurality of openings 31, and the fibrous assembly layer 7 welded or adhesively bonded to the lower surface of the film layer sections 6 and immediately underlying the openings 31. The peripheral edge of the film layer section 6 defining each of the openings 31 is formed with the rising portion 17 extending upward and the upper edge 17a of the rising portion 17 undulates in the second direction Y. Each pair of the film layer sections 6, 6 being adjacent in the first direction X are connected to each other by a bridge-like portion 10 lying between each pair of the openings 31 being adjacent in the second direction Y. The bridge-like portion 10 is classified into a curved one 10a as shown and a flat one 10b. The rising portion 17 may be formed along edges of such bridge-like portion 10 also. The opening 31 preferably has a width of 0.05 ~ 1 mm as measured in the first direction X and a length in the second direction Y corresponding to at least 1.5 times the width. A total area of these openings occupies 10 ~ 40 % of the surface area of the topsheet 2. Component fibers 13 of the fibrous assembly layer 7 partially extend upward through these openings 31. The other characteristics of the film layer sections 6 as well as the fibrous assembly layer 7 closely contiguous to the lower surface of the film layer sections 6 are similar to those in the topsheet 2 shown by Fig. 3. The napkin 1 including such topsheet 2 allows menstrual discharge to flow on the film layer sections 6 in the second direction Y quickly to longitudinally opposite ends of the napkin 1. At these longitudinally opposite ends of the napkin 1 also, menstrual discharge can be effectively absorbed by the core 4. In other words, substantially entire length of the napkin 1 can be used to absorb menstrual discharge.- -

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